Montana
State
Library

This cover sheet created by Internet Archive for formatting.

AUG 2 2 '63
Montana State Library
3 0864 1004 4366 5

MONTANA Industrial Horizons
STATE PLANNING BOARD SUMMER ISSUE, 1963

1863 VIRGINIA CITY CELEBRATES CENTENNIAL THIS SUMMER 1963

This summer, historic Virginia City is observing the one hundredth anniversary of the discovery of rich gold diggings in Alder Gulch on May 26, 1863.

This once famous mining center has been restored to its 19th century appearance by the Virginia City Trading Company and is visited by thousands of tourists each summer. It was recently officially designated an historical site by the Department of the Interior.

It is estimated that in 1864 the Virginia City area had a population of over 11,000. That year, exactly a year to the day after the first gold was panned in Alder Gulch, President Lincoln signed the bill creating the Territory of Montana. Nearby Bannack was named the first capital, but one of the first acts of the new legislature was to move the capital to Virginia City where it remained until 1875 when it was moved to Helena.

This particular gold discovery played a vital role in the development of Montana. The wagon train and stage coach traffic into the area bringing supplies from Ogden, prospectors and camp followers, was the forerunner of the first railroad into the state, the Utah and Northern Railroad.

The first telegraph line into Montana was built by Western Union Company from Salt Lake City to Virginia City in 1866, following the old stage route, and was continued on to Butte and Helena the following year.

Montana's first newspaper, an experimental news sheet edited by Col. W. F. Sanders, was published in Virginia City on February 17, 1864. There was only one issue. The Montana Post, the first newspaper of any consequence, commenced publication in Virginia City on August 27, 1865.

In 1865, the territorial legislature approved the establishment of a school system for the territory and in 1866 Virginia City organized the first school district and opened a public elementary school.

And Calamity Jane started her career at Virginia City!

The celebration at Virginia City this summer is the kick-off for next year's Montana Territorial Centennial and Statehood Diamond Jubillee. The 1963 legislature set up the Montana Territorial Centennial Commission as a temporary agency of the state government with an appropriation for its operation, and Chairman L. W. Upshaw and his staff are ensconced in the elegant old Governor's mansion in Helena. Their elaborate celebration plans will make Montana THE state to visit next summer.

—Montana Highway Commission Photo

No fancy names necessary: "Saloon" meant what it said in the Gold Rush days and still does in Virginia City, Montana. Here, along the board walks are dozens of stores, shops and other authentic reminders of the pioneer past.

Seminar at Montana State College brings together leaders in the various segments of the state's economy to stimulate ideas for making greater use of research to speed economic development in Montana.

See pp. 2-3 ⟶

Research to Aid Economic Development Propo

The Endowment and Research Foundation at Montana State College recently sponsored a seminar to discuss "The Role of Research in the Economic Development of Montana." Over 125 representatives of business, industry, agriculture, education and government were in attendance at the two-day meeting.

Climaxing a series of papers and discussions by leaders in both state and national fields of research, engineering, industry and business, Dr. Leon Johnson, acting president of MSC, proposed a five-point program for organized action in the field of research to hasten the economic development of the state.

The points made by Dr. Johnson in advocating a plan of action were:

- **Establish a statewide research and development council with aggressive and intelligent leadership from technological, educational, business and industrial fields.**
- **Exploit new ideas and resources, with the aid of chambers of commerce in liaison with the central committee of the council.**
- **Develop a clearing house of research and development information between research and development groups; one possible agency would be the Extension Service.**
- **Develop an attitude that will accept the value of trained intelligence.**
- **Strive for harmonious cooperation so as to concentrate our activities and strength to reach common goals.**

Excerpts from talks given by several of the fourteen other speakers at the seminar follow.

Agriculture

Dr. Roy E. Huffman, Dean of Agriculture at **Montana State College,** emphasized that while it is true that growth of Montana's economic base will have to take place largely in the nonagricultural sectors of the economy, it is equally true that agriculture will be a major factor for many years to come.

He said that the output per worker in agriculture has more than doubled in the past 25 years. Only 8 per cent of the population of the U. S. is now required in agricultural production. The fact that 92 per cent of our nation's population can be engaged in other than agricultural production provides the basis for the American level of living. Khruschev knows that so long as approximately 50 per cent of his people are engaged in agricultural production, Russia cannot hope to match the U. S. in military strength and space research and to catch up with us in civilian level of living.

A key factor in the growth of agricultural productivity is the substitution of capital for land and labor. Technical progress has greatly reduced the need for land and human labor. During the past 20 years, the capital investment per worker in agriculture has quadrupled and is approximately 10 per cent greater than the capital investment per worker in manufacturing as a whole; and the consuming public of the nation is provided with the cheapest and highest quality food supply available to any people.

Agricultural research and its resultant greater agricultural productivity creates market and job opportunities—almost 40 per cent of the jobs in the U. S. are in agricultural production and in servicing and supplying farms and ranches and in marketing and processing agricultural products.

Agricultural research has achieved its greatest success in increased output, and production research will continue to be an important part of the total agricultural research effort for as far as we can see into the future. This is for several reasons: (1) population increase; at the same time, about 1 million acres of good agricultural land is being taken each year for nonagricultural purposes; (2) concern with food problems on a worldwide basis; (3) intensely competitive nature of agriculture; (4) continued research is necessary just to "keep even" on agricultural production—problems of pests and diseases are always present and with enough change over time to require constant research effort.

In the future, agricultural production research is likely to be more concerned with improving the quality of the product than it is with increasing the output per unit of the factors of production.

So far as increasing the income of agricultural producers themselves is concerned, research aimed at greater efficiency of production is likely to be most successful. The large number of relatively small producing units in agriculture means that farmers and ranchers are not going to have much control over the prices of their products and, thus, on their net income as it is affected by prices. Reduction in costs of production is where the individual producer can do something if the necessary information is available and he has the management ability to utilize it.

Another important approach to agricultural research is through problem situations or problem areas, such as to what extent can we develop a livestock feeding industry in Montana which is under study at the present time. Similar research, he said, is underway or completed including, for example, a study of the production and marketing potentials for small fruits and vegetables in western Montana, and a research study of the potentials for wool scouring and processing industry is now in the very preliminary stages of development.

In conclusion, Dr. Huffman emphasized that the contribution agricultural research can make to economic development lies in other areas generally than the traditional one of making two blades of grass grow where one grew before. Much of future agricultural research will be in areas that are in part nonagricultural, but the boundary between agriculture and the rest of the economy is becoming increasingly dim if, indeed, it any longer exists.

Research Institute to Aid Local Industries

Dr. Hugh Hunter, Senior Vice President of the Research Triangle Institute in **North Carolina,** discussed one method by which that state had endeavored to raise per capita incomes.

He said that the state's low per capita income stemmed from several factors—a large rural population, many small farms and industrial firms, and a concentration of employment in low-wage industries. Looking ahead, thoughtful North Carolinians saw elements of danger for their economy. Their principal cash crop—tobacco—is threatened by the difficulties arising from the problems connected with the federal price support program as well as the increased concern about the association between tobacco consumption and cancer. Their principal manufacturing industries—textiles and apparel—are threatened by foreign competition. Receipts from sale of frozen chicken in Europe has been harmed by the protectionist attitude of the Common Market members toward agricultural imports.

North Carolina's effort to meet this economic challenge has many facets. They made a real effort to improve their business climate. Reform of their tax structure as it affected manufacturing was one part of this. There is a concentrated program to improve communities in order to make them more attractive to industry, construction and maintenance of a network of rural roads which permit rural residents to commute to manufacturing jobs, and an accelerated program of improvement of public education from the first grade through the graduate schools.

Noteworthy as these efforts are, they were not enough. Thoughtful citizens of the state realized that future economic growth could not be dependent upon the

t Bozeman Seminar

present industrial structure. Not only were North Carolina's dominant industries slow growing, but also a large number of small manufacturing units which characterize the state are unable to support research organizations which will develop new products and processes characteristic of our growing industrial society.

Dr. Hunter observed that, while the exact association between corporate expenditures for research and development and such measures as corporate profitability and sales growth is far from clear, it is possible to cite some facts to point to such an association; and North Carolina's largest single employer, the textile industry, makes no research and development expenditures of any appreciable size. In contrast, he cited examples of "growth firms" such as IBM, Monsanto Chemical, Eli Lilly, Eastman Kodak, and others, whose research and development expenditures range from 4 to 10 per cent of sales.

The absence of research laboratories of the kinds which the growth companies support led North Carolina to look for ways and means of increasing research facilities within her borders.

The Research Triangle constitutes one of their major efforts to diversify the industrial base and to provide the leverage to develop more sophisticated manufacturing units which are able to provide high per-worker incomes.

Over a 70-day period in 1958, $1,500,000 was raised among citizens of the state and used to develop a 5,000-acre tract of land strategically located mid-way between three universities situated within a radius of twenty miles, and to establish the Research Triangle Institute. The Institute is a focal point of the research activity within the Triangle. It is an independent non-profit corporation which is owned by the three universities. Basic purpose of the Institute is to carry on research activities on a contract basis for both public and private organizations. It is self-sustaining.

Other research organizations now located in the Triangle are the Chemstrand Research Center (the research division of Monsanto), the Forest Sciences Laboratory operated by the U. S. Forest Service, and the laboratory of the Electronic Products Division of Corning Glass.

Since its inception four years ago, the employment in the Triangle is about 800. Of this number, a high proportion are highly skilled research scientists.

Its activities have already had a beneficial effect upon the participating universities. Graduate students from the universities have found part-time employment within the Triangle. Faculties in key areas have been strengthened because the need for such people was made apparent by the activities of the Triangle. Research Institute personnel have served as adjunct professors in the universities. The triangle and nearby residential areas have received national recognition for their planning activities.

Dr. Hunter concluded that the work which is now being conducted and will be conducted by the Research Triangle Institute staff is certain to have its effect upon the statistical knowledge and practices in North Carolina industry.

Mining

Speaking on "Potential Opportunities in Our Underground Minerals," **U. M. Sahinen,** associate director of the **Montana Bureau of Mines and Geology,** Butte, reviewed the principal mineral resources of the state and pointed out areas in which research is needed for economic development.

One of the important areas of needed research, he said, is in the field of marketing since every product the state is capable of producing must compete with other sources of the same commodities.

Research is needed, too, Sahinen said, in finding new uses for certain metals and non-metallic products found in the state.

Another area where research is needed is in developing improved methods of searching for mineral deposits that lie under the hundreds of feet of surface material that cover the state. "A most desirable bit of research," he said, "would be an air-borne magneto-meter survey of the entire state."

Petroleum

James B. Patten, executive secretary of the **Montana Petroleum Association,** said that because of the competitive nature of the petroleum industry, research has played a most important role in the successes of individual companies having the foresight to invest in the future. Every major oil company maintains a research center, constantly at work improving techniques used within the industry, improving the products sold, and creating new uses for petroleum.

He noted that a little more than a third of industry research is farmed out to educational units, and if Montana could get only one per cent of the approximate 100 million farmed out by the petroleum industry, it would be a significant addition to the economy of Montana.

Montana still rates as one of the best areas in the continental United States in which to search for oil. And the refining capacity of the state is increasing constantly with additions and revisions to existing refining facilities. The crude capacity of Montana operating refineries has increased from about 58,000 barrels per day in 1952 to a current capacity of about 82,000 barrels per day.

Because of pipeline transportation, we are not necessarily wedded to local demand for crude, having access to markets outside the region. Patten said the same thing, however, is not true in refining and marketing, since the utilization in this area depends principally upon demand in the areas served by Montana's refineries. Although our population growth rate will be lower than the nation as a whole, in the decade 1960 to 1970 we can expect an increase in the consumption of gasoline in our normal marketing area of from 30 to 35 per cent, and the capacity of Montana's refineries must be increased to meet this demand.

One area in which research could be of substantial assistance to the petroleum industry would be in the field of exploration, to develop techniques which would make it easier or more economical to find oil, or to improve generally the commercial aspects of finding, transporting and refining crude petroleum.

In another area of research, projects could be undertaken which would boost the consumption of petroleum products and to create new uses for products, particularly in the field of agricultural chemicals manufactured from petroleum where he said we find greater potential for significant research projects than in any other field. The agricultural industry needs research into rates and ratios of fertilizer applications upon both small grains and upon native hay and pasture. Such investigations are basic and must precede acceptance on the part of the farmer or rancher in fertilization programs. The growing feeder industry in the state would create demands for urea and other chemical animal feeds, which could be made locally from Montana crude.

There are several projects which might be undertaken in the forestry industry which could prove to be of substantial economic benefit to the oil industry and to the state, such as forest fertilization, possibilities of use of diamonium phosphates or similar materials in the control of fires, insecticides for control of forest insects but which are harmless to fish and wildlife.

Park Bears Foiled

Bear-proof litter and garbage cans are appearing in western national parks this summer. The special lidded cans are expected to eliminate bear raids but campers will probably miss the excitement of the big brown lumbering through the camp at all hours of the night and early morning to clatter lids and cans for delicacies.

The tops for the cans were designed by Ted Wirth, now a Billings architect, when he was park architect at Yellowstone.

The lids resemble U. S. mail depository boxes and are opened by pulling a panel to dispose of garbage. The tops weigh 66 pounds each and are fabricated from ⅛-in. sheet steel.

Low bidder for making the tops under the Accelerated Public Works program was Rollie's Machine Works in Kalispell. They turned out 268 tops for Glacier National Park, 750 for Yellowstone, and 208 each for Rainier and Yosemite.

Eddy Bakeries In 55th Year

A far-flung system of bakeries are operated and supervised from Helena, Montana.

In 55 years, J. E. O'Connell has guided Eddy Bakeries corporation from a modest beginning in Missoula to a large complex of bakeries serving Montana, Wyoming, Utah, Idaho, Oregon, Washington, North Dakota, South Dakota, Minnesota and Wisconsin. He is chairman of the board of Eddy Bakeries, Inc., president of Eddy-Bond division, and chairman of the executive committee of General Baking Co.

J. E. O'Connell pictured in the Old Plantation cake plant in Helena, one of the many Eddy Bakeries corporation plants.

President of Eddy Bakeries, Inc., is Joe McVey, a lifelong associate of the company.

With additional properties acquired this year, Eddy Bakeries now has plants in 16 cities in Montana and the surrounding states. Montana plants are located in Helena, Missoula, Great Falls, Havre, Billings, and Butte. Ten other bakeries under the name of Eddy-Bond market bread and cakes in Oklahoma, Kansas, Colorado, Texas, Michigan, Ohio, West Virginia, Kentucky and Missouri.

The Helena general accounting offices provide management, production, supervision and accounting services for both Eddy and Eddy-Bond bakeries.

The leadership of this dynamic, Montana-born organization is "home grown." All management talent is developed from within the company. Employment runs over a thousand, with 352 of the total being located in Montana alone.

USS Helena Silver Returned to State

Just placed on display in the State Museum in Helena is this 19-piece silver service which had been aboard the recently retired cruiser, the **USS Helena.** It will remain at the museum until the vessel is put back in service or is replaced by another ship named **USS Helena.**

Success, Failure In Small Business Study Published

Success in a small business is likely to come to the man who has the following traits:

- He works long, hard hours.
- He has the ability to recover quickly and press on in the face of a setback.
- He is willing to take a minimal profit from his business until he achieves a firm financial position.
- He masters the technical and social skills his operation requires.

This was the conclusion of a study entitled "Factors In Small Business Success or Failure" prepared by Montana State University.

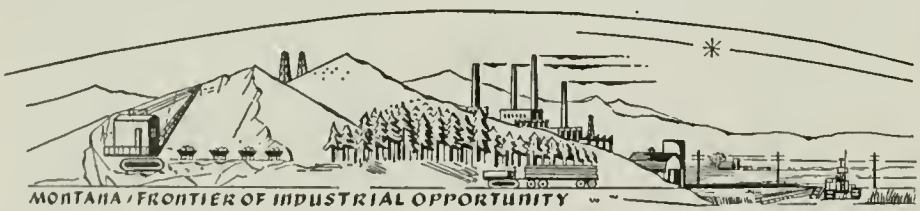
The study is based on the hypothesis that (1) successful and unsuccessful businessmen differ in their personal attitudes as well as in their applications of business principles, and (2) that the degree of success achieved by a small enterprise can best be explained by reference to both of these factors.

The data assembled in the study suggest that there is a "takeoff" or a "slide" point in a businessman's career. Beyond this point, his motivation is affected by his cumulative experience . . . success tends to foster success, and failure tends to foster more failure.

Successful businessmen interviewed were optimistic in their outlook regarding the future of their community and considered them attractive places in which to do business and to live; the unsuccessful businessmen were generally critical of their community. Successful respondents pointed out that in return for the benefits they had received, they owed a share of their time and energy to the community. No successful respondent made a similar point about his civic responsibilities.

The study was carried out by MSU under a grant awarded to the Montana State Planning Board by the Small Business Administration for research into the problems of small business.

A limited number of copies are available from the Bureau of Business and Economic Research, Montana State University, Missoula, Montana, for $1.00.



BULK RATE
U. S. Postage
PAID
Permit No. 83
Helena, Montana

Industrial Horizons

Monthly Newsletter—Vol. 8., No. 4—Summer Issue

Reports on business concerns appearing in this publication do not constitute an endorsement of either the concern named or its products. Statements in this newsletter do not reflect Board policy unless official action is reported.

Montana State Planning Board
Sam W. Mitchell Building
Helena, Montana

BUY MONTANA PRODUCTS — BUILD MONTANA JOBS

Mont. Library Commission
S. Av. & Middlesex
Missoula, Montana

Montana
State
Library

This cover sheet created by Internet Archive for formatting.